DEUTSCHE BÖRSE GROUP

Annual report 2018

Excerpt: report on economic position

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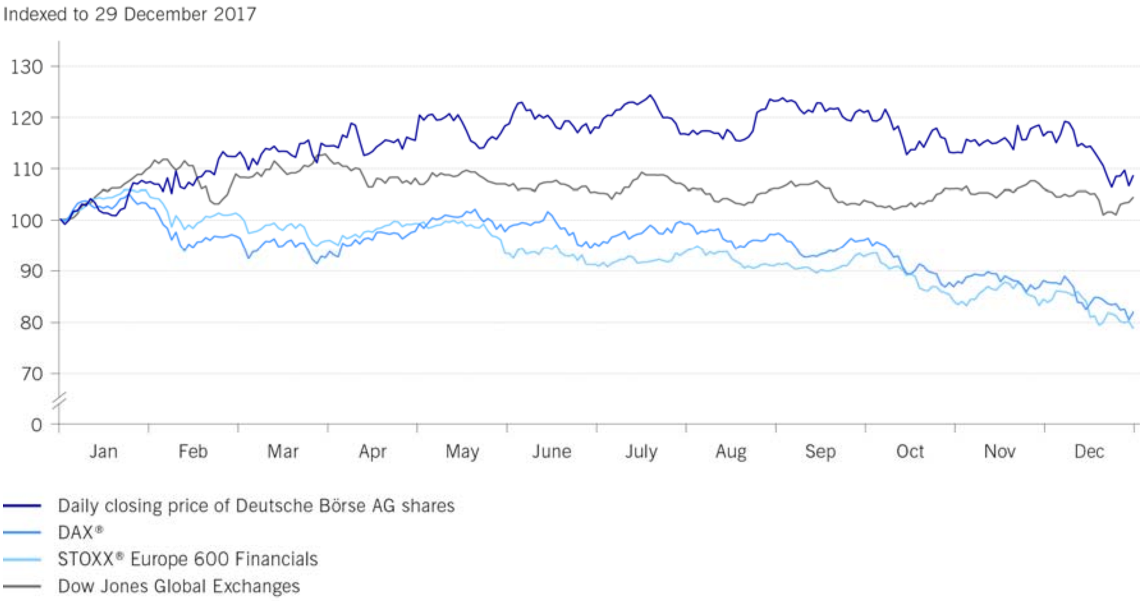
Share price development of Deutsche Börse AG and benchmark indices in 2018



Report on economic position

Macroeconomic and sector-specific environment

Macroeconomic conditions had, and continue to have, a significant impact on trading activity on the markets. For Deutsche Börse Group, the macroeconomic environment during the year under review was rather complex; while some factors had a stimulating effect on business, other factors unsettled market participants, burdening their business activity:

- The robust global economic situation, with output growth in the economies relevant to Deutsche Börse Group (Central Europe, USA) during the year under review.
- The European Central Bank's (ECB) persistent low interest rate policy, with deposit rates at minus 0.4 per cent; however, the ECB reduced the high levels of liquidity provided during the course of the year, and ended the bond-buying programme that is part of the central bank's quantitative easing (QE) policy at the end of 2018.
- The turnaround in the US Federal Reserve's (Fed) interest rate policy continued in the year under review, through interest rate increases of 25 basis points each in March, June, September and December.
- The higher level of stable volatility on equity markets – as measured by the VDAX® index – as one of the key drivers of activity on the cash and derivatives markets.
- The stable economic situation in the euro area at the beginning of the year, albeit with an increasingly deteriorating economic outlook during the third and fourth quarter of 2018 – associated with uncertainty regarding the UK's exit from the EU and its future impact on markets.
- The trade dispute between the US and the EU, China, and other major trading partners, as well as the trade tariffs imposed on commodity and goods imports by the respective parties, fuelling concerns over a global trade war.

- Continued unstable political conditions in some parts of Eastern Europe and recurring flashpoints in the Arab world and their impact on the Western world
- Regulatory projects and the resulting stricter requirements for capital market participants (see the “Regulatory environment” section)

Against this background, growth in the economies of industrialised nations in 2018 remained all about the same compared with the previous year, as estimated by the International Monetary Fund (IMF; 2018: 2.3 per cent; 2017: 2.4 per cent). Global economic growth was 3.7 per cent in 2018 (2017: real growth rate of 3.8 per cent).

While the upswing in Germany continued, initial estimates for 2018 indicate that German gross domestic product (GDP) significantly underperformed the previous year’s levels – despite the slowdown in growth from mid-2018 onwards. The IMF’s January 2019 estimates put growth in German economic output at 1.5 per cent for 2018 (2017: increase in real terms of 2.5 per cent).

Economic performance throughout the euro area also slightly weakened in 2018. While no country experienced a recession in 2018, economic growth in some countries of the European Economic Area slowed, particularly in Germany, France and Italy.

The IMF expects US economic output to post a 2.9 per cent increase for 2018, compared to a 2.2 per cent increase the year before. Given further improvements on the labour market and ongoing high economic growth expectations for 2019, the US Federal Reserve continued to raise its key interest rate in 2018 in four steps to a range between 2.25 and 2.50 per cent.

In the past year, trading on the European capital markets benefited from economic growth in Europe and the US, the major political uncertainty factors, and the continued low interest rate policy of the ECB. The Group saw material increases to trading volumes in equities, equity index derivatives and interest rate derivatives, resulting in overall Eurex trading volumes being significantly above the prior year’s level.

Development of trading activity on selected European cash markets

	2018 €m	Change vs 2017 %
Deutsche Börse Group	**1,719.6**	**17**
London Stock Exchange[1] (£)	1,456.7	8
Euronext[2]	2,067.9	6
Borsa Italiana[1]	753.2	1
Bolsas y Mercados Españoles[1]	587.5	–10

1) Part of London Stock Exchange Group
2) Trading volume in electronic trading (single-counted)
Source: Exchanges listed

Development of contracts traded on selected derivatives markets

	2018 m contracts	Change vs 2017 %
National Stock Exchange of India	3,790.1	54
CME Group	4,844.9	18
Deutsche Börse Group – Eurex®	**1,951.8**	**16**
Intercontinental Exchange	2,474.2	16
Moscow Exchange	1,500.4	–5
Shanghai Futures Exchange	1,201.9	–12

Source: Exchanges listed

Regulatory environment

Ten years on from the financial crisis, global financial markets are even more stable than before – not least due to the fact that regulation of post-crisis financial markets has tightened considerably. The G20 countries have resolved measures focusing on a regulated financial markets infrastructure, such as the one Deutsche Börse Group has operated for many years. To protect the transparency, safety and stability of the financial markets, established rules and regulations, supervisory structures and rules of conduct must now be enforced. Market participants, regulators and supervisory authorities all agree that another financial markets crisis – such as the one seen in the years 2007/2008 – must be avoided and that there must be no further rescue of banks using public-sector funds.

What is important now is to continue developing individual regulatory dossiers, and create a stable and competitive market within the European Union (EU). Especially in 2019, the year when elections to the European Parliament will take place, Europe is facing various challenges, all of which affect the financial markets more or less directly: Brexit, populist movements (which are increasingly nationalist-minded across Europe), the threat of excessive sovereign debt, cyber risks and deregulation are just a few examples. Financial markets are global markets. This is why joint efforts are required to establish global standards – which must be consistently implemented. Our goal must be to create markets that are open and secure; the EU's stability and competitiveness must be ensured, especially in the wake of Brexit.

Financial markets infrastructure regulation

Regulation of markets in financial instruments (MiFID II, MiFIR)

MiFID II and MiFIR have fundamentally transformed the European financial market by expanding transparency provisions, strengthening the stability and integrity of its infrastructure, revising the market's microstructure and improving the quality and availability of market data.

Deutsche Börse Group welcomes the current political efforts to monitor market adjustments to the new rules, with a readiness to close any loopholes that might still exist. This is the only way to ensure transparent action by as many market participants as possible, thus contributing to fair price determination as well as fair competition.

In connection with Brexit, many threshold values which are essential elements of MiFID II (and without which obligations concerning transparency and trading venue obligations no longer work as intended) will need to be recalibrated, given that the biggest financial centre in Europe will then be outside the EU-27. The United Kingdom will lose its access rights to the EU and will henceforth have third-country status. Until new rules on market access for third-country companies take effect, transitional rules are needed to ensure that existing business relationships with UK companies can continue and that these companies can continue to transact on trading venues within the EU.

EMIR: implementation and review

The European Market Infrastructure Regulation (EMIR), which entered into force in 2012, is the most significant regulation for central counterparties. The purpose of the proposals for a revision of the regulation, published in the summer of 2017 (EMIR Review), was to enhance efficiency and to ensure the post-Brexit safety and stability of financial markets. For example, the proposals provide for adjustments to reporting and aim to facilitate access to centralised clearing for smaller market participants. Furthermore, the revision of supervisory structures for central counterparties (CCPs) inside and outside the EU is also an important issue. Deutsche Börse Group welcomes the review: it perceives opportunities for its business and offers market-oriented products and services to its clients in this respect.

Recovery and resolution regulation for central counterparties

Following the European Market Infrastructure Regulation (EMIR), developing recovery and resolution plans for CCPs is the next logical legislative step for making CCPs even more secure and stable. A key aspect of regulation is to create sound incentive structures – on a European as well as a global level – in order to ensure that the interests of the stakeholders involved are aligned. The finalisation of the regulation is not expected before the fourth quarter of 2019.

Central Securities Depository Regulation (CSDR)

With the Central Securities Depositories Regulation (CSDR), a uniform European regulatory framework for central securities depositories (CSDs) was established for the first time in September 2014. Official Regulatory Technical Standards (RTS) were published between March 2017 and May 2018. The RTS on settlement discipline (which will come into force in September 2020) will be the final element of this exercise. The CSDR will harmonise the securities settlement systems and supervisory rules for CSDs throughout Europe. This will strengthen Clearstream's business model – even more so because the provision of integrated banking services will still be permitted. Deutsche Börse Group will support its clients' compliance with the new requirements through existing and extended service offers.

Regulation on benchmarks and indices

The regulation on indices used as benchmarks in financial instruments and financial contracts (the Benchmark Regulation) entered into force on 30 June 2016; the final application deadline was 1 January 2018. Accordingly, benchmark administrators from EU and non-EU countries will have to be admitted or recognised by 1 January 2020. The Benchmark Regulation largely follows the global principles for financial benchmarks of the International Organization of Securities Commissions (IOSCO). To prevent the manipulation of relevant reference interest rates, the G20 countries also instructed the Financial Stability Board to review these reference rates. The two reference interest rates which are relevant for the euro are the Euro Overnight Index Average (EONIA) and the Euro Interbank Offered Rate (Euribor). In their current form, neither of the two complies with the requirements of the Benchmark Regulation. While the benchmark administrator plans to adjust Euribor accordingly, the euro short-term rate (ESTER) was chosen as a replacement for EONIA in the course of a market consultation exercise. The ECB plans to make ESTER available as of October 2019. An extension of the transition phase of the Benchmark Regulation for critical benchmarks until the end of 2021 is currently in discussion.

Deutsche Börse Group, which successfully implemented the IOSCO principles in 2014 for its DAX® indices and the indices of its subsidiary STOXX Ltd., welcomes the agreement reached between the European Parliament and the European Council. The specific impact of this EU regulation on the Group's business activities depends upon the measures to be used for implementation – which are still to be laid out in the form of delegated acts and technical standards by the European Commission and the European Securities and Markets Authority (ESMA).

Capital Markets Union

The European Commission has placed the focus of its Capital Markets Union on growth and industrial policy. Its main goals are the sustainable promotion of growth and job creation and the development of a diversified financial system where bank financing is supplemented by highly developed capital markets. A successful Capital Markets Union is more important than ever when facing the challenges ahead (including the financing of digitalisation, investing in growth companies, furthering an equity culture, and retirement provisions) – especially given that the EU has fallen behind in global competition with respect to numerous metrics. Success in the creation of integrated, pan-European capital markets would free up undeployed capital throughout Europe, as savers would be given a greater choice of investments, while businesses would benefit from enhanced financing options. The European Commission published its action plans on fintech and sustainable finance in March 2018.

The Capital Markets Union affects Deutsche Börse Group's entire value chain. Thus, the Group has actively supported the project from the outset, seeking active involvement in the political debate and contributing to the creation of safer, integrated EU-27 capital markets.

Brexit

The decision by the United Kingdom to exit the European Union has far-reaching implications for financial markets and their participants.

Deutsche Börse Group's paramount objective is to ensure secure and competitive markets. The Group therefore maintains close and continuous contact with its clients, regulatory authorities and associations, in order to analyse the impact of Brexit and recognise the needs of all its stakeholders. Moreover, the Group is developing solutions to support clients, both during the negotiation process and after Brexit, and to mitigate the related effects to the greatest possible extent. At the same time, the Group is making its own preparations for Brexit: the Group is firmly convinced that it will continue to be able to create value for all stakeholders following Brexit – through its existing services along the entire exchange trading value chain (comprising pre-trading, trade execution, and post-trading), as well as additional offers such as the Eurex Clearing Partnership Program introduced in January 2018.

Revision of European supervisory structures (ESAs review)

Based on insights gained from the financial crisis of 2007/2008, the EU is determined to establish more efficient and more strongly integrated supervision in Europe. The introduction of the European System of Financial Supervision (ESFS) in 2010– comprising the three European Supervisory Authorities (ESAs) and the European Systemic Risk Board (ESRB) – established a new supervisory structure at a European level. The European Commission reviews the effectiveness of this supervisory structure every three years.

Overview of regulatory initiatives and their impact on Deutsche Börse Group's business areas

	Cash market/ Xetra	Eurex	EEX	360T	Eurex Clearing	Clear-stream	IFS	GSF	STOXX	Data	Status as at 31 December 2018
Financial market infrastructure											
MiFID II, MiFIR	X	X	X	X	X				X	X	Application since 3 January 2018
EMIR			X	X	X	X		X			Became effective in 2012; review in 2018
Recovery and resolution plans for CCPs			X		X						Draft legislation in the legislative process
CSDR	X				X	X					Became effective in 2014; RTS on settlement discipline published in May 2018
Regulation on benchmarks and indices		X	X		X				X	X	Became effective on 30 June 2016; application since 1 January 2018
Capital Markets Union	X	X	X	X	X	X	X	X	X	X	New action plans in 2018; implementation by 2019
Review of European supervisory structures (ESAs review)	(X)	(X)	(X)	(X)	X	(X)			X	X	Draft legislation in the legislative process
Investment firms											
Basel III			X		X	X					Finalisation at the end of 2017, with subsequent implement-ation throughout the EU
CRD V, CRR II			X		X	X					Finalisation expected by Q1/2019; implementation expected at the beginning of 2021
CRD VI, CRR III			X		X	X					Publication of the EU Commis-sion's proposal expected at the beginning of 2020
IFD/IFR		X		X		X		X			Draft legislation in the legislative process

(X) = indirect effects of ESAs review

As part of this regular review, the European Commission published a draft bill in September 2017. In the wake of Brexit, the Commission has assigned top priority to aligning European supervisory structures to the new political environment, strengthening regulatory integration for certain cross-border financial services within the 27 EU member states.

The work of the ESAs – and especially of the ESMA – has an impact on parts of the value chain of Deutsche Börse Group. At present, the EU's proposal for a revision of the European supervisory structures is still in the legislative process. Efficient supervision with clear responsibilities and decision-making processes remains paramount – especially in conjunction with the described challenges such as Brexit. The revision of European supervisory structures should preserve an environment that promotes growth, while carefully adjusting the existing regulatory regime (where necessary) in order to safeguard financial stability, legal certainty, and the operational viability of supervised enterprises.

Rules for banks and investment firms

Basel III

As a consequence of the 2007/2008 global financial crisis, the Basel Committee on Banking Supervision (BCBS) thoroughly revised its existing Basel II framework for banks, on the basis of corresponding G20 agreements. Further amendments were published on top of the first cornerstones adopted in 2011; the revised Basel III framework was finally (largely) concluded on 7 December 2017. The following changes have already been implemented:

- Stricter definition of the term “capital”
- Increased capital levels
- Revised market risk framework
- Introduction of a leverage ratio
- Introduction of international rules to contain risk concentration (large exposure rules)
- Introduction of liquidity requirements

With the measures adopted in December 2017, revised rules – largely governing capital backing of credit and operational risk – will gradually come into effect between now and 1 January 2022. On top of the credit risk framework, both the standardised approach and the model-based approach have been substantially revised, and operational risk regulations have been restricted to a modified standardised approach. In addition, a floor was determined regarding capital requirements for credit risk, where these are calculated using internal models: the so-called output floor was set at 72.5 per cent of capital requirements under the standardised approach.

Moreover, the BCBS has submitted initial proposals as to how exposures to public-sector entities should be treated in the future. The BCBS will continue to develop these proposals, supplementing the Basel III regulatory framework, and may implement them at a later stage if applicable.

In addition, the Basel Committee has published amended standards for the minimum capital requirements for market risk in January 2018. These include a fundamental revision of the rules for the trading book, in particular, the allocation of financial instruments to the trading or banking book, depending on the type of instrument and the underlying trading intention.

CRD V/CRR II

Accounting for ongoing changes to the Basel III framework and to other elements of bank regulation, the European Commission proposed amendments to the Capital Requirements Directive (CRD IV) and Capital Requirements Regulation (CRR) in November 2016. These proposals concern the minimum requirements for equity and eligible liabilities (MREL) as well as the total loss-absorbing capacity (TLAC); they also involve amendments to the EU Bank Recovery and Resolution Directive (BRRD) and the related regulation.

Besides the changes to MREL and TLAC, the European Commission's proposals concern the following items in particular:

- Introduction of a binding leverage ratio of 3 per cent
- Introduction of a net stable funding ratio (NSFR)
- Revision of the market risk framework

At the end of November 2018, the EU Commission, the EU Parliament and the EU Council reached a general agreement on the drafts of CRD V/CRR II. Deutsche Börse Group expects the final legal texts to take effect during the second quarter of 2019, while the respective requirements will need to be applied from mid-2021.

Deutsche Börse Group actively and continuously contributes to discussions on the modification of banking regulations. In this context, the Group emphasises the impact on financial infrastructure providers with a (restricted) banking licence, as well as the necessity of identifying specific rules for regulated entities to ensure that specific bank requirements do not negatively impact the stability of the financial markets. Moreover, the Group focuses on the capitalisation of its regulated entities, intervening where required in order to safeguard adequate risk coverage.

Due to adjustments to CRD V/CRR II by the Investment Firm Review, only investment firms of systemic relevance will in future be subject to the provisions of banking regulation. Small and medium-sized investment firms shall therefore be covered by the newly developed rules for European investment firms (see explanations below).

CRD VI/CRR III

CRD IV/CRR entered into force on 1 January 2014, implementing the first elements of Basel III. In general, the first Basel III framework provided for transitional provisions that were in force until 1 January 2019. The measures to finalise the Basel III regulatory framework, as resolved by the BCBS in December 2017, and presumably the subsequently resolved regulations on market risks and exposures to public-sector entities, will be incorporated into a new CRD VI/CRR III package. The corresponding draft law of the EU Commission is expected to be published at the beginning of 2020.

Rules for European investment firms (Investment Firm Review, IFR)

The purpose of the European Commission's Investment Firm Review is to develop new regulatory rules for European investment firms. The regulatory framework is set to be proportionate, with capital requirements in line with each firm's size, risk exposure, and type of business model.

Deutsche Börse Group welcomes the approach of taking these market participants' contributions to liquidity, price discovery and transparency into consideration. This new regulatory framework will also cover the Group's subsidiaries Eurex GmbH and 360 Treasury Systems AG.

Transparency of securities financing transactions

The Securities Financing Transactions Regulation (SFTR) was published in the EU Official Journal on 23 December 2015. It provides for reporting requirements concerning securities lending and repo transactions to so-called trade repositories. Furthermore, it sets out requirements regarding the re-pledging of collateral and the reporting obligations of investment fund providers that are active in securities lending. The introduction of comprehensive reporting duties for securities lending transactions has different effects upon the Clearstream subgroup, Eurex Clearing AG and REGIS-TR S.A., with increased efforts – and hence, higher costs – expected for proprietary securities financing transactions.

Yet the obligation to file reports to trade repositories also holds business potential for REGIS-TR. ESMA drew up corresponding implementation standards and submitted them to the European Commission on 31 March 2017.

More information on regulatory issues is available on Deutsche Börse Group's website at www.deutsche-boerse.com/regulation.

Business developments

Given the overall framework conditions outlined at the beginning of the economic report, the situation on the capital markets for financial services providers such as Deutsche Börse Group in the reporting period improved considerably on the previous year. In early 2018, the economic situation was generally viewed as positive. With the start of the second quarter, however, which brought the trade dispute between the US and the EU, China and other important trading partners, as well as tariffs on commodities and goods, this picture turned increasingly gloomy. As concerns about a global trade war deepened, expectations as to the economy in general became dampened – especially expectations for Germany, an economy with a particular dependence on global trade. Then there was the decision of the US administration to withdraw from the nuclear deal with Iran, which also drew macroeconomic consequences. Oil prices rose to the highest level since 2014, dampening the economy further. Volatility – one of the main drivers of trading activity on the cash and derivatives markets – was more pronounced on an average annual level than in 2017, as measured by the VDAX volatility index. Until the middle of the year the benchmark DAX and STOXX® indices were rising, only to then start falling, with the decline gaining speed towards the end of the fourth quarter. In sum, this led to a sharp increase in trading volumes at the cash and derivatives trading venues of Deutsche Börse Group. At the same time, the interest rate policy pursued by the central banks invigorated the market environment. The European Central Bank initially announced that it would reduce its bond-buying programme, known as quantitative easing (QE), during the last three months of 2018 to €15 billion per month. The programme was then discontinued altogether at the end of the year. The US Federal Reserve (Fed) tightened its monetary policy once more, increasing the key interest rate in four steps of 0.25 percentage points each, to reach 2.25 to 2.50 per cent. This reinforced the business in interest rate derivatives at Eurex, and net interest income from banking business posted a marked increase as well. The Group's structural growth areas continued to develop favourably, the drivers being the following segments: Eurex (financial derivatives) including over-the-counter (OTC) clearing, EEX (commodities), 360T (foreign exchange), IFS (investment fund services) and STOXX (index business).

Comparability of figures

Detailed segment reporting

Deutsche Börse Group introduced a new internal segment management starting with the first quarter of 2018. A more detailed classification of reporting segments helps to further enhance transparency, highlighting growth areas. Further information can be found in the "Overview of Deutsche Börse Group – Reporting segments" section.

Changes in the basis of consolidation

Deutsche Börse Group acquired the GTX Electronic Communications Network (ECN) business from US-based GAIN Capital Holdings, Inc. as per 29 June 2018. As part of the transaction, 360 Treasury Systems AG, a wholly-owned subsidiary of Deutsche Börse AG, established its own subsidiary, 360TGTX, Inc., which acted as the purchaser in this transaction. 360TGTX, Inc. has been included in the consolidated financial report of Deutsche Börse AG since 29 June 2018. Revenue and costs associated with 360TGTX have been recognised in the 360T (FX) segment.

With effect from 1 October 2018, Clearstream International S.A. acquired 100 percent of the shares in Swisscanto Funds Center Ltd., London, UK. Since then, the company has been included in the consolidated financial report of Deutsche Börse AG. The company was renamed Clearstream Funds Centre Ltd. as at 2 November 2018. With this transaction, Clearstream has expanded its range of services in the realm of investment funds to include additional distribution channels. New services include the administration of sales agreements and data processing: these will help Clearstream's expansion of its global business strategy.

Results of operations

Deutsche Börse Group looks back on a very successful financial year. Structural drivers of the Group's business were largely positive, and substantially contributed to revenue and profit growth. Trading of power and gas products (commodities), the investment fund services (IFS) business, and clearing of OTC interest rate derivatives, were particular contributors. Structural growth was also evident in the index business at STOXX and in new, innovative derivative products. In addition, cyclical drivers were also mainly intact. Hence, the Group benefited not only from greater equity market volatility but also from a continuously fluctuating interest rate environment. Against this background, the Group posted significant growth in its index derivatives trading. Net interest income from banking business also continued to increase materially, as the US Federal Reserve (Fed) raised its key interest rate four times, to reach a corridor between 2.25 per cent and 2.50 per cent.

Overall, Deutsche Börse Group generated net revenue of €2,779.7 million, up 13 per cent, €9.3 million of which was related to insurance payouts. Adjusted for these, the Group also achieved net revenue growth of 13 per cent in the 2018 financial year; hence, net revenue amounted to €2,770.4 million, of which about 6 percentage points each were due to structural and cyclical factors. Furthermore, to a limited extent, consolidation effects also contributed to higher net revenue.

Segment key figures (adjusted)

	Net revenue		Operating costs		EBITDA	
	2018 €m	2017 €m	2018 €m	2017 €m	2018 €m	2017 €m
Eurex (financial derivatives)	936.1	795.5	304.9	295.7	630.8	503.9
EEX (commodities)	256.6	212.2	141.2	121.0	115.2	91.2
360T (foreign exchange)	78.8	66.5	45.7	36.6	33.1	29.9
Xetra (cash equities)	228.6	218.3	102.7	102.9	131.6	120.6
Clearstream (post-trading)	718.0	667.7	277.7	269.6	440.1	398.1
IFS (investment fund services)	154.3	137.6	86.8	81.9	67.5	55.7
GSF (collateral management)	83.1	81.6	39.5	36.0	43.1	45.6
STOXX (index business)	144.5	127.7	44.5	42.2	100.0	85.5
Data	170.4	154.2	53.0	53.6	117.2	100.6

In the derivatives market, greater and (temporarily) very high volatility was reflected in a material increase of traded volumes in index derivatives, Eurex Exchange's biggest business segment. In addition, traded volumes in interest rate contracts rose once again, largely due to the expectation that the ECB will also change its interest rate policy over the medium term on the one hand, and due to political instability in Europe on the other (particularly with regard to the new Italian government). Overall, the volume of futures and options contracts traded on the Eurex Exchange was up 16 per cent compared to 2017. Aggregate net revenue in the Eurex segment (financial derivatives) was up by 17 per cent year on year.

Deutsche Börse's commodities business, operated by European Energy Exchange and its subsidiaries (EEX group), saw markedly increased volumes in the area of power products trading. This helped EEX to regain market share on the German power derivatives market, after the announced split of the German/Austrian price zone had caused great market uncertainty in the previous year. On a full-year basis, trading in EEX power products thus rose by 19 per cent. Regarding FX trading, operated by Deutsche Börse's subsidiary 360T, it was new customer business that provided the basis for achieving growth in a stagnating market. 360T also benefited from the first-time consolidation of GTX, a US foreign-exchange trading platform, as of the second quarter of 2018.

The cash market showed significant year-on-year increases across all trading platforms. This was attributable, on the one hand, to the extremely robust economic situation in Germany in the first half of the year, which brought the benchmark index DAX to record levels at mid-year. On the other hand, Deutsche Börse gained market share in trading DAX constituents from other trading platforms. In addition, low interest rates make investments in equities and other variable-return securities more attractive compared to fixed income investments. Net revenue increased by 5 per cent.

Net revenue generated by the Clearstream (post-trading) segment increased by 8 per cent. The segment particularly benefited from higher interest rates in the US (significantly higher interest income) and, at the same time, from a rise in the value of cash market securities held in custody.

The Group was able to further expand its investment fund services (IFS) business, primarily by increasing the value of securities deposited – which in turn was mostly due to new clients IFS acquired for its investment funds services. From October 2018 onwards, IFS also benefited from the acquisition and full consolidation of Swisscanto Funds Centre Ltd., London (SFCL).

Revenue in the GSF (collateral management) segment remained in line with the previous year's levels. The reason was a marginal decrease of average outstanding volumes on the repo market year-on-year, as financial institutions continued to borrow liquidity primarily from the central bank and not from the collateralised money market. A similar trend was visible in securities lending. As volumes reduced disproportionately in products with low margins, revenue remained stable due to the improved product mix.

Deutsche Börse Group's index business (STOXX segment) generated growth, especially in licence fees of exchange-traded funds (ETFs) and exchange licence fees. The data business (Data segment) posted growth with the sale of cash and derivatives markets data, as well as with the services for regulatory reporting requirements introduced at the beginning of the year. As a result of the positive business performance, net revenue climbed materially in both the STOXX and the Data segments (by 13 per cent and 10 per cent, respectively).

Deutsche Börse Group's operating costs comprise staff costs and other operating expenses. Staff costs increased to €824.0 million during the year under review (2017: €650.5 million). This marked jump is largely due to exceptional effects in the amount of €158.2 million (2017: €26.4 million). This amount arose as a result of the programme resolved in 2018 to reduce structural costs (Structural Performance Improvement Programme, SPIP), which aimed at streamlining the management structure and enhancing processes. These exceptional effects are the largest contributor to the higher operating costs reported in the chapters on the individual segments. Adjusted staff costs increased by 7 per cent to €665.8 million (2017: €624.1 million) due to a series of reasons:

- Increased average number of employees during the year under review attributable to the hiring of staff who had previously worked on a freelance basis
- Full consolidation of GTX and Swisscanto
- Higher costs for variable remuneration as a result of the improvement in net profit/loss and share price increase

Other operating expenses relate primarily to the costs of enhancing and operating Deutsche Börse Group's technological infrastructure, including, for example, costs for own IT services and external IT service providers. In addition, other operating expenses include the cost of the office infrastructure at all the Group's locations as well as travel expenses, most of which are incurred in connection with sales activities. Because of the Group's business model and the fact that the company does not normally distribute its products and services to end-customers, advertising and marketing costs account for only a very small portion of the company's operating expenses. Operating costs rose to €516.2 million during the year under review (2017: €481.1 million). The increase of approximately 7 per cent is largely due to exceptional effects in the amount of €86.0 million (2017: €65.7 million). These costs were also mainly a result of implementing the "Roadmap 2020" business strategy, organisational restructuring measures, and litigation costs. Adjusted for exceptional effects, the other operating expenses increased by 4 per cent year on year.

The Group's overall operating costs increased by 18 per cent to €1,340.2 million (2017: €1,131.6 million). Adjusted operating costs increased as planned by 5 per cent to €1,096.0 million (2017: €1,039.5 million).

Deutsche Börse Group's result from strategic investments amounted to €4.2 million (2017: €197.8 million). This significant decrease was due in particular to non-recurring revenue related to the full disposal of the stake in BATS Global Markets, Inc. during the first quarter of 2017, as well as to the disposal of shares in ICE US Holding Company L.P. during the fourth quarter of 2017. Adjusted for this non-recurring revenue, the result from equity investments amounted to €4.2 million (2017: €8.3 million).

Earnings before interest, tax, depreciation and amortisation (EBITDA) dropped by 6 per cent – a development which is mainly attributable to the above-mentioned exceptional effects. On an adjusted basis, EBITDA rose significantly, by 17 per cent. Higher net revenue and disproportionally low growth in operating costs are the reasons for this increase.

The Group reports depreciation, amortisation and impairment losses separately from operating costs: the latter were up by 32 per cent, to €210.5 million (2017: €159.9 million). Operating costs include exceptional effects in the amount of €20.6 million (2017: €2.6 million), mainly due to the €15.9 million extraordinary impairment of the value of a technological infrastructure. Adjusted for these effects, depreciation, amortisation and impairment losses rose by 21 per cent, to €189.9 million (2017: €157.3 million). The marked increase is a result of slightly higher regular depreciation and amortisation as well as impairment charges on software, particularly in the Clearstream, IFS and GSF segments.

Deutsche Börse Group key performance figures

	Reported			Adjusted		
	2018 €m	2017 €m	Change %	2018 €m	2017 €m	Change %
Net revenue	2,779.7	2,462.3	13	2,770.4	2,462.3	13
Operating costs	1,340.2	1,131.6	18	1,096.0	1,039.5	5
EBITDA	1,443.7	1,528.5	–6	1,678.6	1,431.1	17
Depreciation, amortisation and impairment losses	210.5	159.9	32	189.9	157.3	21
Net profit for the period attributable to Deutsche Börse AG shareholders	824.3	874.3	–6	1,002.7	857.1	17
Earnings per share (basic) in €	4.46	4.68	–5	5.42	4.59	18

The Group's financial result in the year under review was €–76.4 million (2017: €–79.7 million). Adjusted for exceptional effects, the financial result of the previous year amounted to €–69.7 million. The increase is largely due to provisions for interest rates on potential tax back-payments.

The effective Group tax rate 2018 was 26.3 per cent; adjusted, it was 27.0 per cent, as expected.

The Group's net profit for the period attributable to Deutsche Börse AG shareholders fell by 6 per cent compared with the previous year, while, on an adjusted basis, it rose significantly by 17 per cent, to €1,002.7 million (2017: €857.1 million).

Non-controlling interests in net profit for the period attributable to Deutsche Börse AG shareholders for the period amounted to €28.2 million (2017: €21.7 million). This comprises mainly earnings attributable to non-controlling shareholders of EEX group.

Based on the weighted average of 184.9 million shares, basic earnings per share amounted to €4.46 (2017: €4.68 for an average of 186.8 million shares outstanding). Adjusted, basic earnings per share rose to €5.42 (2017: €4.59).

Key figures by quarter (adjusted)

	Q1		Q2		Q3		Q4	
	2018 €m	2017 €m	2018 €m	2017 €m	2018 €m	2017 €m	2018 €m	2017 €m
Net revenue	691.6	623.4	687.0	623.6	651.4	576.3	740.4	639.0
Operating costs	254.5	245.1	262.9	245.4	260.1	247.4	318.5	301.6
EBITDA	438.1	380.2	425.5	379.5	395.1	333.1	419.9	338.3
Depreciation, amortisation and impairment losses	40.8	35.2	42.1	39.2	43.8	40.3	63.2	42.6
Net profit for the period attributable to Deutsche Börse AG shareholders	270.7	232.2	261.9	232.8	239.6	198.1	230.5	194.0
Earnings per share (basic) in €	1.45	1.24	1.42	1.25	1.30	1.06	1.25	1.04

Comparison of results of operations with the forecast for 2018

For the year 2018, Deutsche Börse Group had expected an increase in structural net revenue of at least 5 per cent on the basis of its diverse structural growth initiatives. It had also anticipated continued economic growth, a better cyclical market environment, including higher equity market volatility and a further rise in interest rates in the US. While, all in all, the global economy performed as anticipated, equity market volatility was significantly above the previous year's level on average during the year. In addition, interest rates were hiked four times in the US – in line with market expectations. The conditions described earlier in the "Business developments" section thus partly exceeded the Group's assumptions used in the forecast. Based on its highly diversified business model, Deutsche Börse Group increased net revenue by a total of 13 per cent, of which around 6 per cent each is attributable to structural and cyclical growth drivers. Furthermore, consolidation effects made a small contribution. The structural growth forecast was therefore slightly exceeded. Key drivers of structural growth were the Eurex (financial derivatives), EEX (commodities), IFS (investment fund services), STOXX (index business) and Data segments. Cyclical factors provided support to Deutsche Börse Group in Clearstream's banking business, for trading activities in interest rate derivatives, and especially for trading in equity index derivatives.

Deutsche Börse Group manages operating costs (adjusted for exceptional effects) – relative to the development of net revenue – based on principles designed to ensure the scalability of the Group's business model. Given a 5 per cent increase in adjusted operating costs, the Group achieved this objective.

An increase in structural driven net revenue of at least 5 per cent was forecast, and of operating costs in a corresponding range. Furthermore, the Group expected an increase in net profit for the period attributable to Deutsche Börse AG shareholders of at least 10 per cent.

The company also anticipates extraordinary effects of approximately €80 million in operating costs. These effects mainly relate to the integration of acquired companies but also to costs related to efficiency measures and restructuring as well as to costs in connection with criminal investigations against Clearstream Banking S.A. in the United States. Together with the announcement of the "Roadmap 2020" strategy programme at the end of April 2018, the Group announced that it would reduce its structural costs by around €100 million per year by the end of 2020. The company anticipated additional costs of around €200 million, of which around €150 million were to be incurred in 2018. As a result, the Group expected total exceptional effects of around €230 million for the 2018 financial year. At a total of €244.2 million, the exceptional effects impacting operating costs incurred in the year under review ultimately exceeded expectations, among others, due to the termination of the preliminary proceedings against the former CEO of Deutsche Börse AG, Carsten Kengeter, and against Deutsche Börse AG itself as an interested party. Overall operating costs totalled around €13 million and included fines and legal fees.

Deutsche Börse Group posted a result that was well above its forecast. This was primarily based on the slightly higher-than-expected increase in structural net revenues, additional cyclical tailwinds and the increase in adjusted operating costs, which were incurred with the aim or increasing scalability.

On an adjusted basis, Deutsche Börse Group achieved a 17 per cent increase in net profit for the period attributable to Deutsche Börse AG shareholders. Moreover, the Group achieved a ratio of interest-bearing gross debt to adjusted EBITDA of 1.2 at Group level, significantly below the target value of 1.5 at the maximum. The adjusted tax rate was 27.0 per cent, exactly as planned. In line with projections, the operating cash flow was clearly positive. Investments in property, plant and equipment, as well as intangible assets in the amount of €160.0 million, were slightly lower than forecast. After increasing its target figures, the Group aimed to distribute dividends equivalent to the mean of the projected range of 40 to 60 per cent of (adjusted) net profit for the period attributable to Deutsche Börse AG shareholders. According to the proposal made to the Annual General Meeting, a figure of 49 per cent was reached.

Comparison of management indicators with the forecast for 2018

		Plan 2018	Actual 2018
Net revenue from structural growth opportunities (excluding exceptional effects)	%	+ >5	~6
Net profit for the period attributable to Deutsche Börse AG shareholders (excluding exceptional effects)	%	+ >10	17
Exceptional effects impacting operating costs	€m	230.0	244.2

Eurex (financial derivatives) segment

Eurex (financial derivatives) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	936.1	796.5	18
Equity index derivatives	466.2	389.7	20
Interest rate derivatives	231.9	208.1	11
Equity derivatives	43.8	36.4	20
OTC clearing (incl. net interest income on margins for OTC interest rate swaps)	25.6	10.8	137
Margin fees	50.0	35.9	39
Other (incl. connectivity, member fees and net interest income on margins for exchange-traded products)	118.6	115.6	3
Operating costs	376.3	326.4	15
Operating costs (adjusted)	304.9	295.7	3
EBITDA	559.4	663.0	–16
EBITDA (adjusted)	630.8	503.9	25
PERFORMANCE INDICATORS			
Financial derivatives: trading volumes on Eurex Exchange	**m contracts**	**m contracts**	**%**
Derivatives[1]	1,951.8	1,675.9	16
Equity index derivatives	949.8	818.6	16
Interest rate derivatives	628.5	582.1	8
Equity derivatives	372.1	275.0	35
Financial derivatives: OTC clearing volumes	**€bn**	**€bn**	**%**
Notional outstanding	7,913.9	1,930.8	310
Notional cleared	14,747.9	1,339.7	1,001

1) Due to other traded products, such as exchange-traded commodities (ETCs) on precious metals derivatives, the total shown does not equal the sum of the individual figures.

In the Eurex (financial derivatives) segment, Deutsche Börse Group reports on financial derivatives trading and the clearing business at Eurex Exchange. The clearing volume of OTC interest rate swaps, one of the structural growth factors for Deutsche Börse Group, is reported as a separated item within the segment. The performance of the Eurex segment largely depends on the trading activities of institutional investors, as well as proprietary trading by professional market participants.

Half of the segment's net revenue (50 per cent) in the year under review was generated from equity index derivatives. Interest rate derivatives and equity derivatives contributed 25 per cent and 5 per cent, respectively. The rapidly-growing interest rate derivatives clearing business more than doubled its contributed share of net revenue to more than 3 per cent. Handling fees for cash collateral provided by clients earned 5 per cent of net revenue. Furthermore, the Eurex segment generated other revenue (12 per cent), mostly from connectivity and participant fees.

Due to a higher level of volatility in the financial markets compared to the prior year, the Eurex segment saw total trading volume in the reporting year increase by 16 per cent to 1,951.8 million contracts (2017: 1,675.9 million). The strongest growth rates were seen in single-stock and equity index derivatives businesses (35 per cent and 16 per cent, respectively). An increase in hedge transactions stemmed from mounting concerns about unresolved trade disputes, political uncertainty and fears of an economic slowdown.

Interest rate derivatives saw an increase in trading volume of 8 per cent. This was driven, on the one hand, by the Fed's four interest hikes during the course of 2018. On the other hand, the ECB's decision to phase out its bond-buying programme by the end of the year opened up the prospect of a foreseeable end to the euro area's extremely low interest rate environment. Eurex derivatives on Italian BTPs generated a record volume of 50.1 million contracts in 2018. This high volume was achieved amidst the events surrounding the formation of a new government in Italy; after that, the new government's budget proposal caused further market uncertainty.

In December 2018, Eurex Clearing AG performed its first multilateral portfolio compression cycle for OTC interest rate derivatives. By means of a compression, investors can reduce their portfolio's notional value, as trades can be offset within their own portfolio or multilaterally with other market participants. As capitalisation rules and the Basel III Leverage Ratio are based on gross notional values, a compression reduces the capitalisation required for derivatives trading while also mitigating operational and credit risks. Thanks to the tri-party portfolio compression conducted by Eurex Clearing, outstanding volumes in OTC interest rate derivatives were reduced by 16 per cent.

The Eurex Clearing Partnership Program that was announced last year has made progress during 2018. The programme's goal is to create a liquid, EU-27-based alternative for the clearing of interest rate swaps denominated in euros. Up to now, 33 participants from the US, UK, Asia and Continental Europe have joined the programme. Against this backdrop, the clearing volume in interest rate derivatives rose significantly compared to last year. Hence, the outstanding notional volume at the end of December 2018 was significantly above the 2017 year-end.

Since 1 February 2016, Eurex Clearing AG has been registered with the Commodity Futures Trading Commission (CFTC) as a derivatives clearing organisation (DCO) under the Commodity Exchange Act with authorisation to provide clearing services for OTC interest swaps for US-based clearing members. Eurex Clearing has thus also been allowed to clear client business for US-based clearing members since 22 December 2018. Moreover, further expansion during 2019 will be seen in clearing services, access models and the global distribution network of OTC interest rate derivatives.

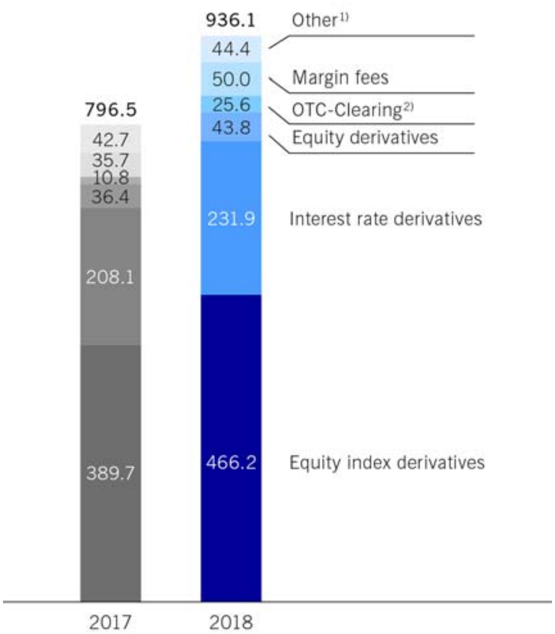
At the end of 2018, Eurex announced that it would extend its Eurex Clearing Partnership Program to also include the repo business, starting in the first quarter of 2019. Besides the clearing of repos for pension funds and asset managers, the programme is aimed, in particular, at expanding the repo business in the interbank market for European sovereign bonds at Eurex.

Net revenue from OTC clearing improved by 137 per cent during the year under review. Both revenue and volume performance were fully in line with expectations.

Overall, net revenue in the Eurex segment increased by 18 per cent in 2018. This development was also helped by the waiver of a temporary reduction in handling fees for cash collateral provided by clients, effective 1 April 2018. Since then, Eurex has reintroduced a handling fee of 20 basis points on cash collateral, which resulted in the corresponding interest income rising sharply compared to the previous year. Relative to net revenue, adjusted operating costs increased below average by 3 per cent. Therefore, adjusted EBITDA rose by 25 per cent.

Net revenue in the Eurex (financial derivatives) segment

€ million



1) Including connectivity and member fees
2) Including net interest income on margins for OTC interest rate swaps

EEX (commodities) segment

EEX (commodities) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	256.6	212.2	21
Power spot	67.1	62.5	7
Power derivatives	82.1	59.9	37
Gas	36.6	30.8	19
Other (incl. connectivity, member fees and admission allowance)	70.8	59.0	20
Operating costs	149.2	124.0	20
Operating costs (adjusted)	141.2	121.0	17
EBITDA	107.2	88.2	22
EBITDA (adjusted)	115.2	91.2	26
PERFORMANCE INDICATORS			
Commodities: trading volumes on EEX	TWh	TWh	%
Power spot	576.6	543.3	6
Power derivatives	4,385.5	3,217.3[1)]	36
Gas	1,962.9	1,981.6	–1

1) Including trading volumes at Nodal Exchange since May 2017

The EEX (commodities) segment comprises Deutsche Börse Group's trading activities on EEX group's platforms, located in Europe, Asia and North America. For participants in more than 600 countries around the world, EEX group offers central market places for energy and commodity products. The product portfolio comprises contracts on energy, metals and environmental products, as well as freight and agricultural products. The segment's most important revenue drivers are the spot and forward power markets, which account for 26 per cent and 32 per cent of revenue, respectively, and the gas market (14 per cent).

Despite a challenging market environment, EEX group increased its trading volume in the spot power market by 6 per cent in 2018. A landmark in respect of short-term power trading was the launch of XBID, a cross-border solution for the connection of the intraday markets – a project initiated by the European Commission. Deutsche Börse had won the contract for the platform's development and operation in late 2013. The agreement was signed in June 2015 by Deutsche Börse AG and the four leading European electricity exchanges, EPEX SPOT, GME, Nord Pool and OMIE. Launching XBID was an important milestone on the way to an integrated European intraday power market. Not only will XBID open up national markets for competition but it also plans to establish liquidity pooling for day-ahead markets in 2019, analogous to intraday markets.

EEX group's power derivatives markets saw an increase in volume of 36 per cent. In the German and Austrian markets, EEX continued to consolidate its position in 2018, following the 2017 debate over price zones and a significant decline in volumes beginning in the second quarter of 2017 resulting from the expected split of the unified German-Austrian price zone. In the meantime, EEX has again consolidated its market share held by its former product for the common German-Austrian market. Overall, trading volumes in these markets increased by 7 per cent year on year. EEX has already exceeded the market share it had in Germany before the announced split of the price zone. In its other European core markets – namely France, Italy and Spain – EEX expanded its market share, expanding from what was already a high level. Furthermore, EEX saw strong growth in the Netherlands and in Eastern European power futures.

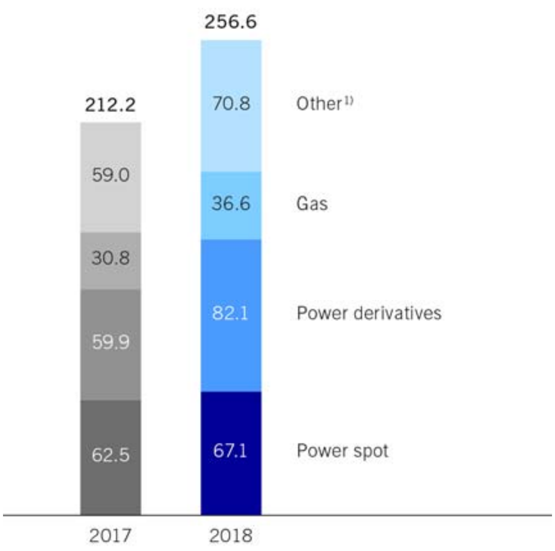
US-based Nodal Exchange, which EEX group had acquired in May 2017, was another positive development. In an overall declining market, Nodal managed to stabilise trading volumes and hence increased its market share compared to its competitors. During 2018, Nodal Exchange introduced the T7® trading system, an important technical foundation for offering new products and asset classes.

Gas market trading volumes were virtually flat during the year under review, hence the performance was mixed. While EEX group's spot market growth was significant, volumes on the derivatives market declined.

Across all product groups, EEX group boosted net revenue by 21 percent during the year under review; the segment's adjusted EBITDA rose by 26 per cent.

Net revenue in the EEX (commodities) segment

€ million



1) Including connectivity, member fees and admission allowance

360T (foreign exchange) segment

360T (foreign exchange) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	78.8	66.5	18
Trading	66.7	56.5	18
Other (incl. connectivity and member fees)	12.1	10.0	21
Operating costs	49.9	46.5	7
Operating costs (adjusted)	45.7	36.6	25
EBITDA	28.9	20.0	45
EBITDA (adjusted)	33.1	29.9	11
PERFOMANCE INDICATORS			
Foreign exchange: trading volumes on 360T®	€bn	€bn	%
Average daily volume	69.2[1)]	61.0	13

1) Including GTX trading volumes since July 2018

In the 360T (foreign exchange) segment, Deutsche Börse Group manages its foreign-exchange trading business, which takes place on the platforms provided by its subsidiary 360T.

The acquisition of GAIN Capital Holdings, Inc.'s GTX Electronic Communication Network (ECN) business was a major milestone within the expansion of Deutsche Börse Group's foreign-exchange franchise. The deal was signed on 29 June 2018 at a purchase price of US$100.1 million. By acquiring this US-based ECN platform for forex trading, 360T has strengthened its position on the global forex markets and its presence on the US market. The transaction is in line with Deutsche Börse Group's "Roadmap 2020" to grow its business in a targeted manner and has expanded and diversified 360T's footprint in OTC forex trading. With GTX, 360T has won a spot interbank FX platform whose product range and customer base complement 360T's existing business. The company has been integrated into Deutsche Börse Group's structures as scheduled during the year under review, with the integration being largely completed at the end of 2018. The reported results include the acquisition since its closing.

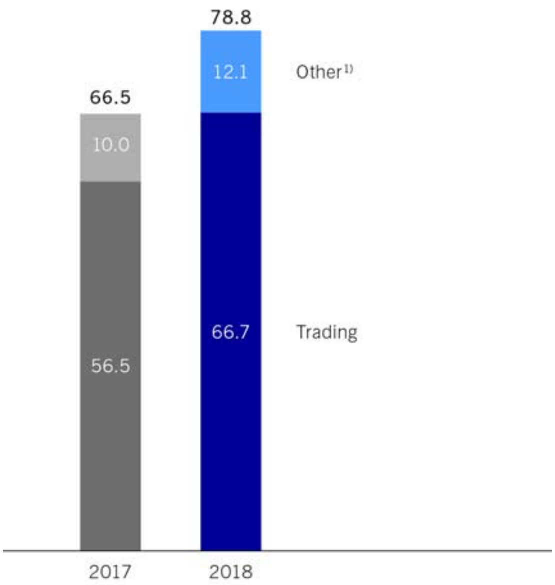
Net revenue of the 360T segment is largely driven by trading activities of institutional investors, internationally active companies, and the provision of liquidity through so-called liquidity providers. During the year under review, the segment generated 81 per cent of its revenue from foreign-exchange trading and 19 per cent from the provision of other services.

The average trading volume per day (including GTX ECN) increased by 13 per cent year on year; it benefited especially from numerous new client acquisitions and also from slightly higher trading activity of market participants. Drivers were the Fed's interest rates hikes and the ECB's announced expiration of its bond-buying programme by the end of 2018. Also, temporarily increased volatility was caused by the US and Chinese governments imposing trade tariffs on each other and the impact on global trade flows, as well as continuing uncertainty about the United Kingdom leaving the European Union.

Together with Eurex's trading and clearing business, 360T also made considerable progress in realising FX revenue synergies. Besides a central order book for OTC transactions, which is in its ramp-up phase and has completed initial proof-of-concept tests, further participants joined during the fourth quarter of 2018, both as liquidity providers and as clearing members for Eurex®-listed FX futures. By extending trading times to 23 hours per day, the trading volume rose correspondingly. With the completion of tests expected during the first half of 2019, market participants will have access to clearing services for over-the-counter forex transactions for the first time. In combination with the Data segment, 360T has rolled out a product providing data on both foreign-exchange spot and swap markets. So far, the new product has been very popular with market participants.

Like for like, i.e. excluding effects from the initial consolidation of the GTX ECN business, net revenue grew by 10 per cent to €73.0 million in the financial year 2018. This more pronounced percentage increase, compared to trading volumes, is mostly down to the product mix, with higher volumes in products generating higher margins. The GTX business contributed €5.8 million to net revenue. The 360T segment's adjusted EBITDA improved by 11 per cent during the year under review.

Net revenue in the 360T (foreign exchange) segment
€ million



1) Including connectivity and member fees

Xetra (cash equities) segment

Xetra (cash equities) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	228.7	218.3	5
Trading and clearing	170.6	161.1	6
Listing	17.8	15.4	16
Other (incl. connectivity and member fees)	40.3	41.8	–4
Operating costs	118.8	108.4	10
Operating costs (adjusted)	102.7	102.9	0
EBITDA	115.5	115.1	0
EBITDA (adjusted)	131.6	120.6	9
PERFORMANCE INDICATORS	€bn	€bn	%
Trading volume (single-counted order book turnover at the trading venues Xetra®, Börse Frankfurt and Tradegate)	1,719.6	1,467.6	17
Equities	1,552.7	1,320.9	18
ETF/ETC/ETN	166.9	146.7	14

In the Xetra segment (cash equities), Deutsche Börse Group reports on the development of its cash market trading venues (Xetra®, the Frankfurt Stock Exchange and Tradegate). Besides trading and clearing services, the segment generates revenue from the listing of companies' securities and exchange admissions, connecting clients to their trading venues and providing services to partner exchanges.

During the year under review, the Xetra segment generated most of its net revenue (75 per cent) from the trading and clearing of securities. Listing fees and other revenues contributed 8 per cent and 18 per cent, respectively.

Cash market trading volumes rose by 17 per cent in 2018, marking the highest level since 2008. Compared to other European trading platforms, Deutsche Börse Group's trading venues also performed very successfully in 2018 and grew stronger than their relevant peers.

Moreover, Xetra further expanded its position as the reference market for trading in DAX constituents and increased its market share (68 per cent), thereby building on what was already a high level (2017: 65 per cent). The attractiveness of Xetra exchange trading was also enhanced thanks to T7, the new trading technology introduced in July 2017. T7 offers numerous advantages to clients. For instance, the new system even further reduces latency, which is the time needed for order processing.

Initial public offerings (IPOs) in the Xetra segment also developed very well. In total, 18 IPOs generated an aggregate issue volume of €11.6 billion. 16 companies opted for a Prime Standard listing, while two issuers went public in the Scale segment for small and medium-sized enterprises. At €4.2 billion, the IPO of Siemens Healthineers AG in March 2018 was the biggest flotation by far, followed by the issuances of Knorr-Bremse AG and DWS Group GmbH & Co. KGaA.

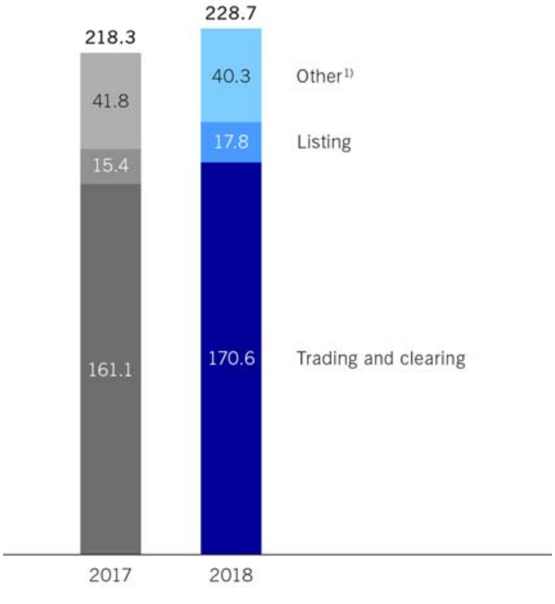
Furthermore, trading volumes in ETFs on indices surpassed last year's level at €151.1 billion (2017: €132.2 billion). Hence, Deutsche Börse was again the leading trading venue for trading ETFs in Europe: a total of 1,368 ETFs were listed as at 31 December 2018 (2017: 1,205 ETFs). Assets under management in ETFs totalled €524.2 billion at the end of 2018, which was in line with last year's figure (2017: €527.1 billion). New ETF issuers with Deutsche Börse were JP Morgan AM, Expat and HANetf.

Low interest rates and the general market environment further increased demand for Xetra-Gold® as an investment instrument in 2018. This bearer bond is backed by physical gold. At the end of the financial year 2018, the gold held in custody reached a record of 181.4 tonnes (2017: 175.0 tonnes), equivalent to around €6.5 billion (2017: €6.0 billion). Amongst the exchange-traded commodities (ETCs) available on Xetra, the most actively traded security was Xetra-Gold. The aggregate order book turnover on Xetra was approximately €2.66 billion in 2018.

Net revenue in the Xetra segment increased by 5 per cent in 2018 but fell short of the trading volumes' growth rate. This was mainly driven by the roll-out of the new T7 trading system and the related adjustments to pricing models. Correspondingly, average margins did not reach the previous year's level. The segment's adjusted EBITDA rose by 9 per cent.

Net revenue in the Xetra (cash equities) segment

€ million



1) Including connectivity and member fees

Clearstream (post-trading) segment

Clearstream (post-trading) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	727.3	667.7	9
Custody	382.8	385.1	–1
Settlement	76.0	79.5	–4
Net interest income from banking business	155.5	106.3	46
Third-party services	32.1	28.7	12
Other (incl. connectivity, account maintenance)	80.9	68.1	19
Operating costs	351.9	294.6	19
Operating costs (adjusted)	277.7	269.6	3
EBITDA	375.2	373.1	1
EBITDA (adjusted)	440.1	398.1	11
PERFORMANCE INDICATORS			%
Assets under custody ICSD and CSD (average) (€bn)	11,302.7	11,245.9	1
Settlement transactions ICSD (m)	48.39	44.65	8
Cash balances (daily average) (€bn)	13.1	13.6	–4

Deutsche Börse Group's settlement and custody activities are reported under the Clearstream (post-trading) segment. By providing the post-trade infrastructure for the Eurobond market, Clearstream is responsible for issuance, settlement, management and custody of securities from more than 50 markets worldwide. Net revenue in this segment is mainly driven by the volume and value of securities under custody, which determine the deposit fees. The settlement business depends primarily on the number of settlement transactions processed by Clearstream, both via stock exchanges and over the counter (OTC). This segment also contains the net interest income originating from Clearstream's banking business.

As an international central securities depository (ICSD), Clearstream provides settlement and custody services for securities held in Luxembourg. As a central securities depository (CSD), Clearstream serves the market for German securities. In the year under review, the custody and settlement businesses accounted for 53 per cent and 11 per cent of the segment's net revenue, respectively, while net interest income from Clearstream's banking business contributed 22 per cent. Additionally, the segment provides third-party services, such as regulatory reporting services (4 per cent of net revenue) and other services, including connectivity and account maintenance (11 per cent of net revenue).

The value of securities held in custody in the CSD and ICSD business increased slightly by 1 per cent year on year. The quantity of international settlement transactions increased by 8 per cent during the 2018 reporting year.

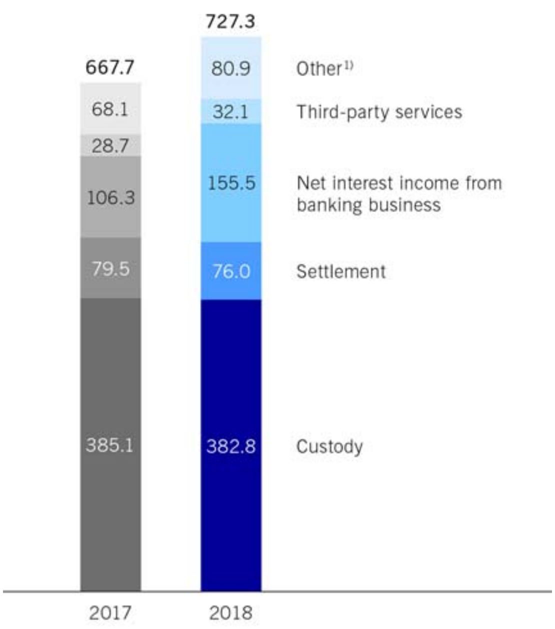
In April 2018, five markets (Belgium, France, Italy, Luxembourg and the Netherlands) migrated to Clearstream's new investor-CSD model for TARGET2-Securities (T2S), which is the pan-European settlement platform for central bank money introduced by the ECB. Clearstream's investor-CSD model allows customers to consolidate their securities and cash activities in the T2S markets, enabling them to benefit from higher liquidity, better funding and lower risk. Clearstream has thus succeeded in migrating the first truly cross-border volumes onto the ECB's pan-European securities settlement platform. At the same time, Clearstream has been the first central securities depository to provide its clients with access to all T2S markets (using central bank money) and international markets by way of a comprehensive investor-CSD strategy – and all this through a single point of access. In December 2018, the new model covering all classes of securities was enhanced to Austria. As at the end of 2018, approximately 80 per cent of the custody and settlement volume of T2S markets was available through Clearstream's investor-CSD model.

The segment's main growth driver in 2018 was the 46 per cent rise in net interest income, which Clearstream generated on the cash deposits pledged by its clients. This resulted above all from rising US interest rates, as around 52 per cent of the cash deposits are denominated in US dollars. During the course of the year, the US Federal Reserve raised its key interest rates on four separate occasions – and most recently in December – to a range between 2.25 per cent and 2.50 per cent. Average customer cash balances were down 4 per cent year on year.

Business involving regulatory reporting services also increased markedly during the 2018 reporting year. Clearstream offers such regulatory services to market participants and supervisory authorities via REGIS-TR, a joint venture with Spain's Iberclear. Net revenue is recognised under third-party services and was 4 per cent higher year on year.

Overall, the Clearstream segment increased net revenue by 9 per cent in 2018, including €9.3 million related to insurance services. Adjusted for this exceptional effect, net revenue rose by 8 per cent year-on-year. Operating costs adjusted for exceptional effects advanced by 3 per cent, resulting in an 11 per cent increase in adjusted EBITDA.

Net revenue in the Clearstream (post-trading) segment
€ million



1) Including connectivity and account maintenance

IFS (investment fund services) segment

IFS (investment fund services) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	154.3	137.6	12
Custody	65.9	61.3	8
Settlement	49.4	45.2	9
Other (incl. connectivity, order routing and reporting fees)	39.0	31.1	25
Operating costs	108.3	85.7	26
Operating costs (adjusted)	86.8	81.9	6
EBITDA	46.0	51.7	–11
EBITDA (adjusted)	67.5	55.7	21
PERFORMANCE INDICATORS			%
Assets under custody (average) (€bn)	2,384.9	2,218.7	7
Settlement transactions (m)	24.5	22.7	8

In the IFS (investment fund services) segment, Deutsche Börse Group reports the settlement activity and custody volumes of exchange-traded mutual and hedge funds processed by Clearstream. Customers are able to settle and manage their entire fund portfolio via Clearstream's Vestima® fund processing platform. Net revenues in the IFS segment are largely a function of the value of assets under custody and the number of settlement transactions, which determine the fees. The IFS business is one of the dedicated structural growth engines of Deutsche Börse Group.

In the year under review, custody services accounted for 43 per cent of the segment's net revenue while settlement services contributed 32 per cent. Moreover, the segment provides other services such as connectivity, order routing and reporting, which contributed 25 per cent to net revenues.

Despite the weak stock market performance, the value of securities held in custody increased by 7 per cent during the 2018 financial year. Growth was mainly due to a number of large new clients, which Clearstream won for its investment fund services, including renowned names such as Banque Internationale à Luxembourg (BIL), SIX SIS and Lombard Odier who chose Clearstream as a strategic partner to consolidate their funds business. Whereas BIL migrated its mutual fund holdings in 2018 and plans to follow this by transferring its hedge funds, SIX SIS expects to start this process in the near future.

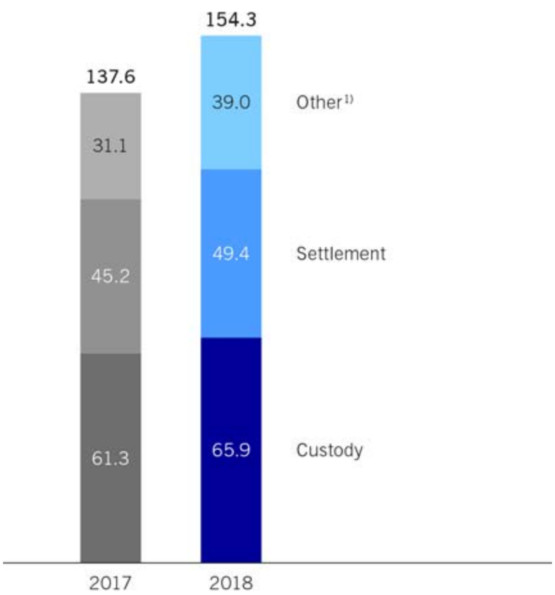
The increase in settlement transactions reflects the trading activity of new clients, as well as generally heavier trading activities compared to the previous year – particularly in the international business.

In an effort to further expand its fund services offering, Clearstream acquired Swisscanto Funds Centre Ltd., London, (SFCL) from Zürcher Kantonalbank in the reporting year. The transaction, involving an amount in the high double-digit million-euro range, closed as at 1 October 2018. As at 2 November 2018, the company was renamed to Clearstream Funds Centre Ltd. Through this transaction, Clearstream has extended its range of fund services to include the management of distribution contracts and data processing. Clearstream will be able to offer SFCL's range of services not only to SFCL's existing client base but also to its own international clientele. Thanks to this broader offering, Clearstream anticipates revenue in this segment to increase by a low double-digit million-euro amount and plans to realise synergies in terms of cross-selling.

As a result of both higher custody assets and number of settlement transactions, as well as the full consolidation of SFCL as at 1 October 2018, the IFS segment recorded 12 per cent growth in its net revenue in the past financial year. Due to the segment's highly scalable business model, adjusted EBITDA climbed by 21 per cent.

Net revenue in the IFS (investment fund services) segment

€ million



1) Including connectivity, order routing and reporting fees

GSF (collateral management) segment

GSF segment (collateral management): key indicators

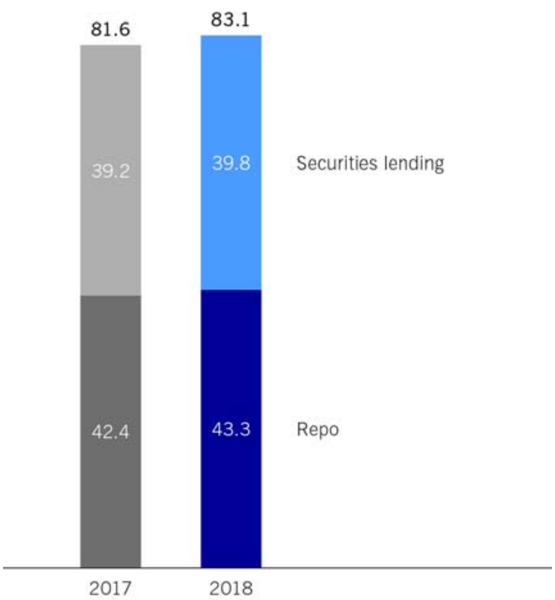
	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	83.1	81.6	2
Repo	43.3	42.4	2
Securities lending	39.8	39.2	2
Operating costs	48.4	38.7	25
Operating costs (adjusted)	39.5	36.0	10
EBITDA	34.2	42.9	–20
EBITDA (adjusted)	43.1	45.6	–5
PERFORMANCE INDICATORS	€bn	€bn	%
Average outstandings from securities lending	53.8	60.0	–10
Average outstandings from repo	377.6	399.8	–6

In the GSF (collateral management) segment, Deutsche Börse Group reports business development at Clearstream's securities financing and collateral management services.

Net revenue from the repo franchise – which encompasses triparty repo, GC Pooling® and collateral management – contributed 52 per cent of the segment's net revenue while net revenue from securities lending services accounted for 48 per cent.

Net revenue in the GSF (collateral management) segment

€ million



In the GSF business, average outstanding volumes in repo decreased by 6 per cent. Since the ECB began to provide additional liquidity on the market as part of its quantitative easing (QE) programme, volumes declined over time, especially in GC Pooling. At the same time, securities lending revenues (strategic and fails lending programmes) overcompensated the declining collateral volumes, raising GSF net revenue overall by 2 per cent compared to 2017.

The segment's adjusted EBITDA declined by 5 per cent in the reporting year due to a disproportionate rise in adjusted operating costs.

STOXX (index business) segment

STOXX (index business) segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	144.5	127.7	13
ETF licences	43.8	41.5	6
Exchange licences	31.3	27.1	15
Other licences[1]	69.4	59.1	17
Operating costs	53.9	47.7	13
Operating costs (adjusted)	44.5	42.2	5
EBITDA	90.6	79.9	13
EBITDA (adjusted)	100.0	85.5	17
PERFORMANCE INDICATORS	€bn	€bn	%
Assets under management in ETFs on STOXX® indices (average for the period)	81.9	76.8	7
Assets under management in ETFs on DAX® indices (average for the period)	27.7	28.7	–2
Index derivatives (traded contracts) (m)	875.4	763.6	15

1) Including licences on structured products

The STOXX segment (index business) comprises Deutsche Börse Group's index business, which it conducts through its STOXX Ltd. subsidiary. The extensive range of indices offered by STOXX provides issuers with a wealth of opportunity to create financial instruments for a diverse range of investment strategies.

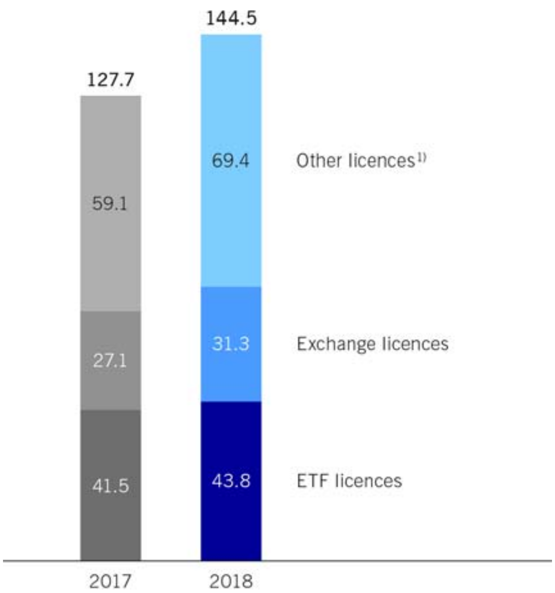
Of the STOXX segment's net revenue, 30 per cent was attributable to ETF licence fees, 22 per cent to exchange licence fees and 48 per cent to other licence fees. While the amount of ETF licence fees depends on the volume globally invested in ETFs based on the STOXX and DAX indices, exchange licence fees are mainly driven by the trading volumes of STOXX and DAX index derivatives at Eurex. Licence fees from structured products are shown as part of other licence fees.

Another innovative product developed by the STOXX segment was the recently introduced STOXX® Europe 600 ESG-X index, which features a standardised screening based on ESG exclusion criteria. The screening is based on criteria applied by institutional investors and helps to reduce both reputational and idiosyncratic risks. Furthermore, with the launch of fixed-income indices designed to reflect the concept of liability-driven investing (LDI) in the second quarter of 2018, STOXX has focused on a market amounting to some 1 trillion pound sterling. These indices can be used as independent reference points for defined benefit pension plans; they are also suitable as flexible, investable building blocks for LDI portfolios. The index methodology allows pension insurance schemes to better align their assets with their liability profile over time.

After a dynamic start to the year, the weaker market environment – and especially the reallocation of investors' funds from Europe to other regions during the further course of the year – caused a slowdown in the growth of ETF licence fees. Due to the rise in volatility and the resulting higher volumes traded at Eurex, the net revenue from exchange licences was significantly higher. Overall, the segment's net revenue in full-year 2018 increased by 13 per cent. Adjusted EBITDA improved by 17 per cent during the year under review.

Net revenue in the STOXX (index business) segment

€ million



1) Including licences on structured products

Data segment

Data segment: key indicators

	2018	2017	Change
FINANCIAL KEY FIGURES	€m	€m	%
Net revenue	170.3	154.2	10
Cash and derivatives	113.6	108.8	4
Regulatory services	17.8	10.7	66
Other (incl. CEF® data services)	38.9	34.7	12
Operating costs	83.5	59.6	40
Operating costs (adjusted)	53.0	53.6	–1
EBITDA	86.7	94.6	–8
EBITDA (adjusted)	117.2	100.6	17
PERFORMANCE INDICATORS	thousand	thousand	%
Subscriptions	337.8	438.2	–14

In the Data segment, Deutsche Börse Group reports on the development of its business concerning licences for real-time trading and market signals, together with the supply of historical data and analytics. The most important products in this respect are order book data from the cash and derivatives markets, as well as reference data of Deutsche Börse and data from its partner exchanges. The segment generates much of its net revenue on the basis of long-term client relationships; it is relatively independent of trading volumes and capital markets volatility. Revenues from regulatory services are also shown in this segment.

During the year under review, 67 per cent of net revenue was attributable to the supply of cash and derivative markets data; 10 per cent of net revenue was generated with regulatory services and the remaining 23 per cent with other services.

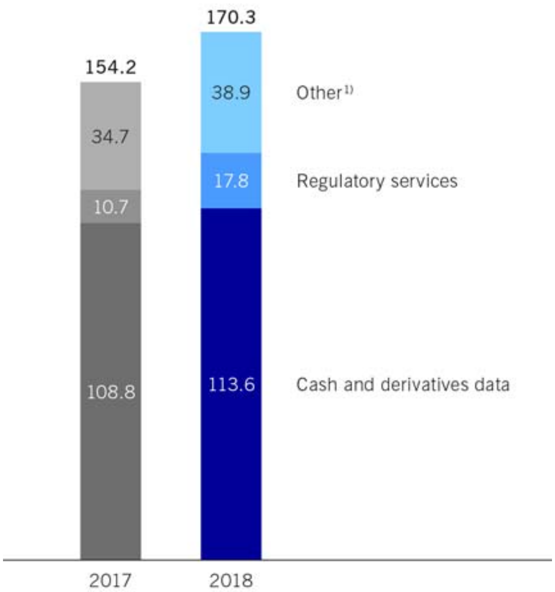
Despite a decline in the number of subscribers, the segment increased net revenue from cash and derivatives markets data by 4 per cent in the financial year under review. This performance was also driven by the further development of the segment’s licensing model, which has been differentiated regarding specific usage – especially with regard to automated data processing.

Net revenue from regulatory services increased by 66 per cent in the financial year 2018. Growth was particularly driven by the Regulatory Reporting Hub, which was rolled out at the beginning of January 2018. The Hub offers clients bundled solutions tailored to their reporting requirements, especially in accordance with the revised EU Markets in Financial Instruments Directive (MiFID II).

Overall, the segment boosted net revenue by 11 per cent in 2018, with adjusted EBITDA up by 17 per cent.

Net revenue in the Data segment

€ million



1) Including CEF® data services

Development of profitability

Deutsche Börse Group's return on shareholders' equity expresses the ratio of net income after taxes to average equity available to the Group during the course of 2018. At 17.1 per cent, return on shareholders' equity was below the previous year's ratio in the 2018 financial year (2017: 18.8 per cent). Adjusted for the exceptional effects described in the "Results of operations" section, the return on equity amounted to 20.8 per cent (2017: 18.4 per cent).

Financial position

Cash flow

Consolidated cash flow statement (condensed)

	2018 €m	2017 €m
Cash flows from operating activities (excluding CCP positions)	1,176.5	1,107.2
Cash flows from operating activities	1,298.2	1,056.2
Cash flows from investing activities	792.0	181.9
Cash flows from financing activities	–832.9	–501.0
Cash and cash equivalents as at 31 December	1,839.0	580.2
Cash and other bank balances as at 31 December	1,322.3	1,297.6

Cash and cash equivalents at Deutsche Börse Group comprise cash and bank balances – to the extent that these do not result from reinvesting current liabilities from cash deposits by market participants – as well as receivables and liabilities from banking business with an original maturity of three months or less. Cash and cash equivalents as at 31 December 2018 amounted to €1,839.0 million (31 December 2017: €580.2 million). Other cash and bank balances amounted to €1,322.3 million as at 31 December 2018 (31 December 2017: €1,297.6 million).

In the 2018 financial year, Deutsche Börse Group generated a positive cash flow of €1,257.3 million (2017: €737.1 million). The informative value of Deutsche Börse Group's cash flow is relevant only to a limited extent since it includes in particular CCP positions which are subject to significant fluctuations on the reporting date, as well as the inflows and outflows resulting from the banking business. Adjusted by these technical effects, the cash flow in the 2018 financial year can essentially be explained as follows:

Deutsche Börse Group generated €1,176.5 million (2017: €1,107.2 million) in cash flow from operating activities, excluding changes in CCP positions on the reporting date. This figure is determined indirectly, resulting from the net profit for the period amounting to €852.5 million (2017: €896.0 million), which is adjusted by non-cash expense and income such as depreciation and deferred tax assets. Additionally, changes in working capital resulted in a positive contribution to cash flow from operating activities amounting to €105.7 million (2017: €156.6 million), such contribution arising in particular in connection with the programme for the implementation of the company strategy "Roadmap 2020", which contributed a total of €108.3 million to the increase in provisions.

The strongly positive operative cash flow from operating activities is essentially matched by the purchase of the GTX Electronic Communication Network business in the amount of €85.9 million and Swisscanto Funds Centre Ltd. in the amount of €83.3 million, investments in intangible assets and property amounting to €160.0 million, a treasury share repurchase programme amounting to €364.2 million and the distribution of €453.3 million in dividends by Deutsche Börse AG for the 2017 financial year (dividends for the 2016 financial year: €439.0 million).

As in previous years, the Group assumes it will have a strong liquidity base in financial year 2019 due to its positive cash flows from operating activities, adequate credit lines and flexible management and planning systems.

For further details regarding the cash flow, please refer to the consolidated cash flow statement as well as note 22 to the consolidated financial statements.

Operating leases

Deutsche Börse Group uses operating leases and does so, above all, for the office building in Eschborn that the Group moved into in the second half of 2010 and for the buildings used by Clearstream International S.A. in Luxembourg (see note 27 to the consolidated financial statements for details).

Liquidity management

Deutsche Börse Group meets its operating liquidity requirements primarily from internal financing, i.e. by retaining generated funds. The aim is to maintain liquidity at about the same level of operating costs for one quarter (currently between €150 million and €250 million). An intra-Group cash pool is used for pooling excess liquidity cash as far as regulatory and legal provisions allow. All of the Group's cash is invested in short-term instruments to ensure rapid availability and are largely collateralised using liquid bonds from prime-rated issuers. Moreover, Deutsche Börse AG has access to external sources of financing, such as bilateral and syndicated credit lines, and a commercial paper programme (see note 25 to the consolidated financial statements for details on financial risk management). In recent years, Deutsche Börse AG has leveraged its access to the capital markets to issue corporate bonds in order to meet its structural financing needs.

Debt instruments issued by Deutsche Börse AG (outstanding as at 31 December 2018)

Type	Issue volume	ISIN	Term	Maturity	Coupon p.a.	Listing
Fixed-rate bearer bond	€600 m	DE000A1RE1W1	10 years	October 2022	2.375%	Luxembourg/ Frankfurt
Fixed-rate bearer bond	€500 m	DE000A1684V3	10 years	October 2025	1.625%	Luxembourg/ Frankfurt
Fixed-rate bearer bond	€600 m	DE000A2LQJ75	10 years	March 2028	1.125%	Luxembourg/ Frankfurt
Fixed-rate bearer bond (hybrid bond)	€600 m	DE000A161W62	Call date 5.5 years/ final maturity in 25.5 years	February 2021/ February 2041	2.75% (until call date)	Luxembourg/ Frankfurt

Capital management

The company's clients generally expect it to maintain conservative interest coverage and leverage ratios and, thereby, achieve a good credit rating.

Therefore, the Group targets a minimum consolidated interest coverage ratio (defined as the ratio of EBITDA to interest expenses from financing activities) of 16. In 2018, Deutsche Börse Group achieved this target, with an interest coverage ratio of 40.8 (2017: 32.7). This figure is based on relevant interest expenses of €41.2 million and adjusted EBITDA of €1,678.6 million.

The data included for the purpose of calculating interest coverage comprises interest expenses incurred for financing Deutsche Börse Group, less interest expenses incurred by subsidiaries that are also financial institutions, including Clearstream Banking S.A., Clearstream Banking AG and Eurex Clearing AG. Interest expenses incurred that are not related to Group financing are not included in the calculation of interest coverage.

Deutsche Börse Group's interest coverage ratio

Interest expense from financing activities	Issue volume	2018 €m	2017 €m
Fixed-rate bearer bond (term until March 2018)[1]	€600 m	1.7	7.6
Fixed-rate bearer bond (term until October 2022)	€600 m	14.8	14.8
Fixed-rate bearer bond (term until October 2025)	€500 m	8.7	8.7
Fixed-rate bearer bond (term until March 2028)[2]	€600 m	5.6	–
Fixed-rate bearer bond (hybrid bond)	€600 m	16.5	16.5
Other interest expense		2.1	4.4
Total interest expense (incl. 50 % of the hybrid coupon)		**41.2**	**43.7**
EBITDA (adjusted)		1,678.6	1,431.1
Interest coverage[3]		**40.8**	**32.7**

1) With maturity on 26 March 2018 and fully repaid
2) Refinancing of the bond maturing on 26 March 2018
3) EBITDA / interest expense from financing activities (includes 50 per cent of the interest on the hybrid bond)

Moreover, Deutsche Börse had targeted a maximum ratio of interest-bearing gross debt to EBITDA of 1.5 at Group level. In 2018, the Group achieved the target ratio of gross debt to EBITDA of 1.2. This figure is based on gross debt of €1,982.2 million, and adjusted EBITDA of €1,678.6 million. Gross debt comprises interest-bearing liabilities of €1,982.2 million.

According to the definition of the rating agency, only 50 per cent of the Group's hybrid bond is deducted to determine gross debt as well as interest expenses.

Furthermore, the company endeavours to maintain the strong AA credit rating of its subsidiary Clearstream Banking S.A., in order to ensure the long-term success of its Clearstream securities settlement and custody segment. The activities of the Eurex Clearing AG subsidiary also require Deutsche Börse AG to have and maintain a strong credit quality.

Deutsche Börse AG has stated its intention to maintain certain additional financial indicators for Clearstream entities that it believes to be consistent with an AA rating. Specifically, this involves a commitment to maintain minimum tangible equity (equity less intangible assets) of €700 million for Clearstream International S.A., and of €400 million for Clearstream Banking S.A. During the reporting period, Clearstream International S.A. exceeded this commitment, reporting tangible equity of €1,337.0 million (2017: €1,206.6 million); Clearstream Banking S.A. was also higher at €1,253.3 million (2017: €1,213.6 million). To the extent that the Clearstream subgroup has financial liabilities to non-banks, the subgroup is committed to a minimum interest coverage ratio of 25. During the reporting period, as in the previous year, Clearstream had no financial liabilities to non-banks; for this reason, no interest coverage ratio is being reported.

Since 2007, Deutsche Börse Group's target figures are based on the calculation method used by S&P Global Ratings (S&P) rating agency. As S&P has adjusted its method for rating market infrastructure providers, new key performance indicators, as listed below, will be used in the future. In order to achieve a minimal financial risk profile consistent with an AA rating and in accordance with the S&P method, the company aims to achieve the following targets for the new key performance indicators:

- Net debt to EBITDA ratio: no more than 1.75
- Free funds from operations (FFO) to net debt: equal to or greater than 50 per cent
- Interest coverage ratio (calculation changes by S&P): at least 14
- Tangible equity (for Clearstream Banking S.A.): total of at least €1.1 billion

When calculating these key performance indicators, Deutsche Börse Group will closely follow the method used by S&P.

- To determine EBITDA, reported EBITDA is adjusted by the result from strategic investments, as well as by expenses for operating leases and unfunded pension obligations. In 2018, EBITDA amounted to €1,444 million.
- In order to determine FFO, interest and tax expenses are deducted from EBITDA, applying the respective imputed adjustments for operating leases and unfunded pension obligations. FFO in 2018 amounted to €1,091 million.
- The Group's net debt is reconciled by first deducting 50 per cent of the hybrid bond, as well as the surplus cash as at the reporting date, from gross debt (i.e. from interest-bearing liabilities). Liabilities from operating leases and unfunded pension obligations are then added. Net debt in 2018 amounted to €1,642 million.

S&P bases the determination of the key performance indicators on the corresponding weighted average of the reported or expected results of the previous, current and following reporting periods. To ensure the transparency of the key performance indicators, Deutsche Börse Group reports them based on the respective current reporting period.

The tables "Relevant key performance indicators according to the conventional calculation method" and "Relevant key performance indicators according to the adjusted calculation method" illustrate the calculation method and point out the differences between old and new values for the reporting year. As of the first quarter of 2019, Deutsche Börse Group will report exclusively according to the adjusted method.

Relevant key performance indicators according to the conventional calculation method

		Target figures	2018
Gross debt / EBITDA		≤ 1.5	1.2
Interest coverage ratio		≥ 16	40.8
Tangible equity of Clearstream International S.A. (as at the reporting date)	€m	≥ 700	1,337.0
Tangible equity of Clearstream Banking S.A. (as at the reporting date)	€m	≥ 400	1,253.3

Relevant key performance indicators according to the adjusted calculation method

		Target figures	2018
Net debt / EBITDA		≤ 1.75	1.1
Free funds from operations (FFO) / net debt	%	≥ 50	69
Interest coverage ratio		≥ 14	25.1
Tangible equity of Clearstream Banking S.A. (as at the reporting date)	€m	≥ 1,100	1,253.3

Dividends and share buy-backs

Deutsche Börse Group generally aims to distribute dividends equivalent to between 40 and 60 per cent of adjusted net profit for the period attributable to Deutsche Börse AG shareholders. Within this range, the Group manages the actual dividend payout ratio depending on the business performance and taking into account aspects of continuity. Furthermore, the company aims to invest the remaining freely available funds primarily in organic growth, but also for complementary external development. Should the investment of these funds by the Group not be possible, additional dividend payouts would represent another possibility for distribution.

For the financial year 2018, Deutsche Börse AG is proposing that the Annual General Meeting resolve to pay a dividend of €2.70 per no-par value share (2017: €2.45). This dividend corresponds to a distribution ratio of 49 per cent of net profit for the period, attributable to Deutsche Börse AG shareholders, adjusted for exceptional effects described in the “Results of operations” section (2017: 53 per cent, also adjusted for exceptional effects). Given 183.3 million no-par value shares bearing dividend rights, this would result in a total dividend amount of €495.0 million (2017: €456.4 million). The number of shares bearing dividend rights is produced by deducting 6.7 million treasury shares from the ordinary share capital of 190.0 million shares.

Furthermore, Deutsche Börse AG announced in April 2017 that it would launch a share repurchase programme with a volume of around €200 million during the second half of 2017. The programme was operated from 27 November 2017 to 28 March 2018. On top of this, Deutsche Börse AG announced on 5 December 2017 that it would launch an additional share repurchase programme – also with a volume of around €200 million – during the course of 2018. The programme was operated from 13 August 2018 to 2 November 2018. Further details on the purchase of treasury shares within the scope of the share repurchase programme, pursuant to section 160 (1) no. 2 of the AktG are available in the notes to Deutsche Börse AG’s annual financial statements, section “Equity”.

Credit ratings

Credit ratings

	Long-term	Short-term
Deutsche Börse AG		
S&P Global Ratings	AA	A–1+
Clearstream Banking S.A.		
Fitch	AA	F1+
S&P Global Ratings	AA	A–1+

Deutsche Börse AG regularly has its credit quality reviewed by S&P, while Clearstream Banking S.A. is rated by Fitch and S&P.

On 13 September 2018, Fitch Ratings affirmed the AA credit rating of Clearstream Banking S.A. with a stable outlook. The rating reflects Clearstream Banking’s leading position in the post-trading business and its diligent liquidity management, as well as its impeccable capitalisation.

On 20 November 2018, S&P affirmed the AA credit rating of Deutsche Börse AG. The rating reflects the assumption that the Group will continue its growth strategy and reach at least the lower end of its growth targets.

On the same date, S&P affirmed the AA credit rating of Clearstream Banking S.A. with a stable outlook. The rating reflects the strong risk management, minimum debt levels, as well as Clearstream's strong position on the international capital markets, especially through its international custody and transaction business.

As at 31 December 2018, Deutsche Börse AG was one of only two DAX-listed companies awarded an AA rating by S&P. The rating histories of Deutsche Börse AG and Clearstream Banking S.A. are given in the five-year overview.

Net assets

Material changes to net assets are described below; the full consolidated balance sheet is shown in the consolidated financial statements.

Consolidated balance sheet (extract)

	31 Dec 2018 €m	31 Dec 2017 €m
ASSETS		
Non-current assets	15,642.0	10,883.7
thereof intangible assets	4,191.6	4,091.0
thereof goodwill	2,865.6	2,770.9
thereof other intangible assets	952.7	911.2
thereof financial assets	11,168.6	6,535.4
thereof financial assets measured at amortised cost	1,057.1	–
thereof financial assets available-for-sale (AFS)	–	1,692.0
thereof financial instruments held by central counterparties	9,985.4	4,837.2
Current assets	146,257.1	124,257.7
thereof financial instruments held by central counterparties	94,280.3	79,510.7
thereof restricted bank balances	29,833.6	29,392.0
thereof other cash and bank balances	1,322.3	1,297.6
EQUITY AND LIABILITIES		
Equity	4,963.4	4,959.4
Liabilities	156,935.7	130,182.0
thereof non-current liabilities	12,828.7	7,023.8
thereof financial instruments held by central counterparties	9,985.4	4,837.2
thereof financial liabilities measured at amortised cost	2,283.2	1,688.4
thereof deferred tax liabilities	194.5	226.8
thereof current liabilities	144,107.0	123,158.2
thereof financial liabilities measured at amortised cost	19,219.7	14,126.3
thereof financial instruments held by central counterparties	94,068.3	78,798.6
thereof cash deposits by market participants	29,559.2	29,215.3

Deutsche Börse Group's total assets have increased in comparison with the previous year – this is primarily due to the rise in the financial instruments held by central counterparties on the reporting date.

Taking into account the two acquisitions which lead to an increase in goodwill, the increase in intangible assets was relatively moderate. Adjusted by the rise in the financial instruments held by central counterparties, current assets showed an increase due to the increase in debt instruments valued at amortised cost on the reporting date, such debt instruments covering essentially the activities of the Clearstream subgroup.

The equity of the Group is essentially similar to the prior year's equity. The increase in the cumulative profits is matched primarily by an increase in the amount of treasury shares purchased. Adjusted by the rise in the financial instruments held by central counterparties, non-current liabilities have increased due to the emission of a ten-year euro bond in the amount of €600.0 million. The increase in the current liabilities is mainly due to the development of the contributions by the clearing and settlement business of the Clearstream subgroup.

Overall, Deutsche Börse Group invested €160.0 million in the continued business in intangible assets and property, plant and equipment (capital expenditure or capex) in the reporting period (2017: €149.2 million). The Group's largest investments were made in the Clearstream and Eurex segments.

Working capital

Working capital comprises current assets less current liabilities, excluding technical closing-date items. Current assets, excluding technical closing-date items, amounted to €1,098.3 million (2017: €1,020.9 million). As Deutsche Börse Group collects fees for most of its services on a monthly basis, the trade receivables of €397.5 million included in current assets as at 31 December 2018 (31 December 2017: €331.9 million) were relatively low compared with net revenue. The current liabilities of the Group, excluding technical closing-date items, amounted to €1,468.5 million (2017: €1,280.1 million, excluding technical closing-date items). The Group therefore had slightly negative working capital of €370.2 million at the end of the year (2017: €259.2 million).

Technical closing-date items

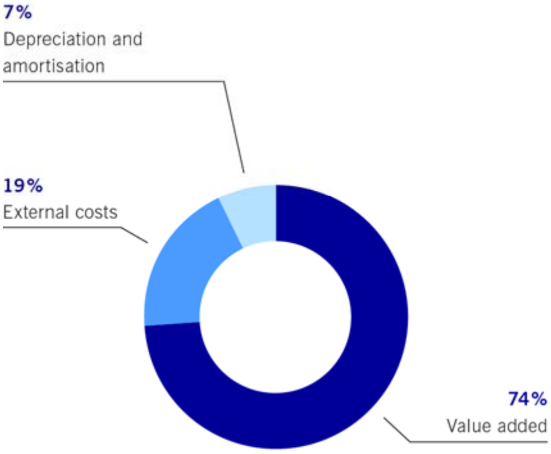
The "financial instruments of the central counterparties" item relates to the function performed by Eurex Clearing AG and European Commodity Clearing AG: since they act as the central counter parties for Deutsche Börse Group's various markets, their financial instruments are carried in the balance sheet at their fair value. The financial instruments of the central counterparties are described in detail in the risk report and in notes 3, 13 and 25 to the consolidated financial statements.

Market participants linked to the Group's clearing houses partly provide collateral in the form of cash deposits, which are subject to daily adjustments. The cash deposits are generally invested on a secured basis overnight by the central counterparties and reported in the balance sheet under "restricted bank balances". The total value of cash deposits at the reporting dates relevant for the reporting period (31 March, 30 June, 30 September and 31 December) varied between €28 billion and €30 billion (2017: between €27 billion and €35 billion).

Value added: breakdown of company performance
Value added is calculated by subtracting depreciation and amortisation as well as external costs from the company performance. In 2018, the value added by Deutsche Börse Group amounted to €2,028.3 million (2017: €1,974,8 million). The breakdown shows that large portions of the generated value added flow back into the economy: 25 per cent (€509.8 million) benefit shareholders in the form of dividend payments, while 41 per cent (€824.0 million) was attributable to staff costs in the form of salaries and other remuneration components. Taxes accounted for 15 per cent (€304.3 million), while 2 per cent (€47.5 million) was attributable to external creditors. The 17 per cent value added that remained in the company (€342.7 million) is available for investments in growth initiatives, among other things (see the “Origination of value added” and “Distribution of value added” charts).

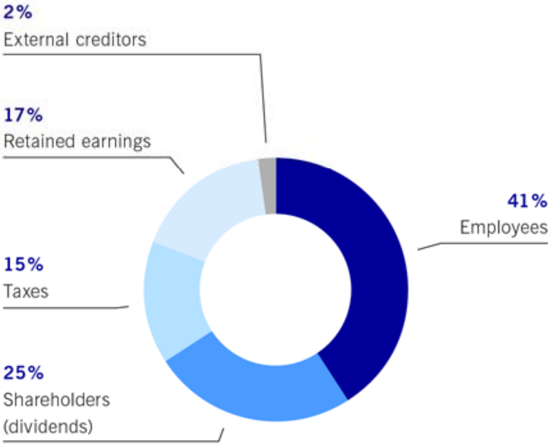
Origination of value added

Company performance: €2,755.0 million



Distribution of value added

Value added: €2,028.3 million



Overall assessment of the economic position by the Executive Board

The economic environment remained favourable in 2018, both in Europe and globally, whereas the outlook took a turn for the worse at the beginning of the second half of the year. This was especially due to trade conflicts and the imminent Brexit. Nevertheless, interest rates in the USA rose again, while the ECB allowed bond purchases in the euro zone to expire at the end of December. At the same time, average equity market volatility was higher than in the previous year. Against this background, equity index derivatives volumes rose significantly, and equities trading benefited as well. At the same time, volumes in interest rate derivatives grew and net interest income of the Clearstream segment improved due to higher interest rates for overnight client balances denominated in US dollars. Alongside these cyclical factors, the Group's structural net revenue also increased by 6 per cent. The main reasons for this were the positive development of new products and OTC clearing in the Eurex segment, the gain in additional market share in the energy markets, and the further expansion of the investment fund and index business. In summary, these factors led Deutsche Börse Group's financial performance to develop very positively during the 2018 financial year, slightly exceeding the range of net revenue anticipated by the Executive Board. The Group recorded a 13 per cent increase in net revenue. Adjusted operating costs were up 5 per cent on the previous year's figure. This was mainly due to higher staff costs, which were attributable to the increased number of employees and higher variable remuneration. Moreover, the full consolidation of two companies acquired in the course of the year contributed to the rise in costs. On an adjusted basis, Deutsche Börse Group achieved a 17 per cent increase in net profit attributable to Deutsche Börse AG shareholders, exceeding the anticipated range of 10 per cent to 15 per cent.

The Executive Board considers Deutsche Börse Group's financial position to be extremely sound during the reporting period. The Group generated high operating cash flows, as in the previous year. Given the increase in adjusted EBITDA, Deutsche Börse Group was able to further improve the ratio of interest-bearing gross debt to EBITDA at Group level: With a value of 1.2, the target value of 1.5 was clearly undercut.

Rating agencies again affirmed the Group's credit quality, awarding it excellent ratings in 2018. On 20 November 2018, S&P Global Ratings (S&P) confirmed Deutsche Börse AG's AA credit rating. On the same day, S&P – just like Fitch Ratings on 13 September 2018 – affirmed the AA credit rating of Clearstream Banking S.A. Both ratings were assigned a stable outlook.

Deutsche Börse AG has offered its shareholders attractive returns for years – and the financial year 2018 is no exception. At €2.70 (2017: €2.45), the dividend proposed for distribution to shareholders is above the prior-year level. As a result of the improvement in earnings, the distribution ratio decreased from 53 per cent in the previous year to 49 per cent in the year under review (adjusted for exceptional effects in both cases), and was thus in line with the Executive Board's forecast range of 40 to 60 per cent.

The Group's net assets, financial position and results of operations can be considered to be in an orderly state.

Deutsche Börse Group: five-year overview

		2014	2015	2016	2017	2018
Consolidated income statement						
Net revenue	€m	2,047.8	2,220.3[1]	2,388.7	2,462.3	2,779.7
thereof net interest income from banking business	€m	37.6	50.6	84.0	132.6	204.5
Operating costs (excluding depreciation, amortisation and impairment losses)	€m	–990.0	–1,164.2[1]	–1,186.4	–1,131.6	–1,340.2
Earnings before interest, tax, depreciation and amortisation (EBITDA)	€m	1,136.1	1,054.6[1]	1,239.2	1,528.5	1,443,7
Depreciation, amortisation and impairment losses	€m	124.8	119.0	131.0	159.9	210.5
Net profit for the period attributable to Deutsche Börse AG shareholders	€m	762.3	613.3[1]	722.1	874.3	824.3
Earnings per share (basic)	€	4.14	3.31[1]	3.87	4.68	4.46
Consolidated cash flow statement						
Cash flows from operating activities	€m	677.3	10.1	1,621.4	1,056.2	1,298.2
Consolidated balance sheet						
Non-current assets	€m	11,267.2	14,386.9	11,938.7	10,883.7	15,642.0
Equity	€m	3,752.1	3,695.1	4,623.2	4,959.4	4,963.4
Financial liabilities measured at amortised cost	€m	1,428.5[2]	2,546.5	2,284.7	1,688.4[2]	2,283.2
Performance indicators						
Dividend per share	€	2.10	2.25	2.35	2.45	2.70[3]
Dividend payout ratio	%	58[4]	55[4]	54[4]	53[4]	49[4][5]
Employees (average annual FTEs)		3,911	4,460[1]	4,731	5,183	5,397
Personnel expense ratio (staff costs / net revenue)	%	23[4]	27	25	26	30
Tax rate	%	26.0[4]	26.0	27.0	27.0[4]	27.0[4]
Return on shareholders' equity (annual average)[6]	%	21	20[4]	19[4]	18[4]	21[4]
Deutsche Börse shares						
Year-end closing price	€	59.22	81.39	77.54	96.80	104.95
Average market capitalisation	€bn	10.8	14.7	14.0	17.2	21.5
Rating key figures						
Gross debt / EBITDA		1.5[4]	1.9[4]	1.5	1.4	1.2
Interest coverage ratio	%	26.0[4]	23.2[1]	25.3	32.7	40.8
Deutsche Börse AG: S&P Global Ratings	Rating	AA	AA	AA	AA	AA
Clearstream Banking S.A.: S&P Global Ratings	Rating	AA	AA	AA	AA	AA
Fitch	Rating	AA	AA	AA	AA	AA
Market indicators						
Xetra®, Börse Frankfurt and Tradegate						
Trading volume (single-counted)	€bn	1,282.6	1,635.7	1,377.0	1,467.6	1,719.6
Eurex®						
Number of contracts	m	2,097.9	1,672.6[1]	1,727.5	1,675.9	1,951.8
Clearstream						
Assets under custody (annual average)	€bn	10,717.5	11,459.7	11,172.9	11,245.9	11,302.7
Investment fund services (IFS)						
Assets under custody (annual average)	€bn	1,497.2	1,814.5	1,902.0	2,218.7	2,384.9

1) Figure for 2015 without consideration of International Securities Exchange (ISE), which represents a discontinued operation due to its disposal as at 30 June 2016
2) Bonds that will mature in the following year are reported under "other current liabilities" (2014: €139.8 million, 2017: €599.8 million).
3) Proposal to the Annual General Meeting 2019
4) Adjusted for exceptional effects; please refer to the consolidated financial statements for the respective financial year for adjustment details.
5) Amount based on the proposal to the Annual General Meeting 2019
6) Net profit for the period attributable to Deutsche Börse AG shareholders / average shareholders' equity for the financial year based on the quarter-end balance of shareholders' equity

Acknowledgement

Published by
Deutsche Börse AG
60485 Frankfurt/Main
Germany
www.deutsche-boerse.com

Concept and layout
Deutsche Börse AG, Frankfurt/Main
HGB Hamburger Geschäftsberichte GmbH & Co, Hamburg

Photographs
Thorsten Jansen (Portraits Joachim Faber
and Theodor Weimer, group picture Executive Board)
Jörg Baumann (Title)

Financial reporting system
Combined management report, consolidated financial statements and notes produced in-house using firesys and SmartNotes.

Publication date
15 March 2019

The German version of this report is legally binding.
The company cannot be held responsible for any misunderstanding or misinterpretation arising from this translation.

We would like to thank all colleagues and service providers who participated in the compilation of this report for their friendly support.

Publications service
The annual report 2018 is both available in German and English.

Order numbers
1000–4833 (German annual report)
1010–4834 (English annual report)

The annual report 2018 of Deutsche Börse Group is available as pdf on the internet:
www.deutsche-boerse.com/annual_report

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